

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGIONORDER NO. 90-308WASTE DISCHARGE REQUIREMENTS  
FOR  
LASSEN COUNTY  
WESTWOOD CLASS III LANDFILL  
WALKER, ET AL., TRUST  
LASSEN COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Board) finds that:

1. Lassen County (hereafter Discharger) submitted a water quality monitoring plan, dated 17 April 1987; monitoring well analysis results and well installation report, dated 9 March 1990; a SWAT report containing waste characterization, site evaluation, and water quality analysis, dated 10 April 1990; and a periodic site review report containing a facility design and operation plan, dated 20 April 1990.
2. The Discharger requests revised waste discharge requirements (WDRs) for reclassification of an existing Class II-2 landfill to a Class III landfill waste management unit (WMU). The WMU is currently regulated by Order No. 75-216, which is no longer in conformance with the California Code of Regulations (CCR), Title 23, Division 3, Chapter 15 (hereafter Chapter 15).
3. The 40-acre disposal site, comprised of Assessor's Parcel No. 123-09-38, is owned by the Walker Trust which is managed by W. M. Beaty and Associates, Inc., and operated by Lassen County. Waste disposal activities are currently limited to 2.5 acres of the site. The facility is one mile west of the town of Westwood in Section 6, T28N, R9E, MDB&M, as shown on Attachment "A" which is incorporated herein and made part of this Order.
4. Walker, et al., Trust is the landowner of the real property at which the discharge will occur. Walker, et al., Trust is ultimately responsible for ensuring compliance with these requirements. Lassen County is responsible for compliance with these requirements, including day-to-day operation and monitoring. Enforcement action will be taken against Walker only in the event that enforcement action against Lassen County is ineffective or would be futile, or that enforcement is necessary to protect public health or the environment.
5. The WMU consists of a landfill which uses a modified trench area fill method for disposal of household refuse and wood waste.
6. This is an existing facility first operated by the Discharger in December 1975 as a sanitary landfill. The Discharger plans to discharge nonhazardous solid waste at the site until 2041. The total capacity of the landfill is estimated at 774,000 cubic yards. The remaining capacity is estimated at 693,730 cubic yards.

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7. The Discharger plans to continue short-term stockpiling of car bodies, large metal items, wire, and white goods. Salvage operations remove the car bodies, metal, and white goods for recycling off-site. The Discharger plans to provide a 500-gallon, double-walled, aboveground tank for collection of drain oil and construct a storage shed for lead acid and household batteries. Both the tank and storage shed will be designed to contain the contents in case of spillage or rupture. Bins for recyclable materials such as aluminum, glass, and plastic are also anticipated to be implemented in the near future.
8. An unknown amount of ash from a wood-fired cogeneration facility in Westwood has been discharged to the landfill. The dumping of ash has ceased at the request of the Integrated Waste Management Board and the Discharger. The Discharger may want to take ash at the site in the future. The discharge of ash, if commingled with putrescible organic matter that produces acidic leachate, could release pollutants in concentrations which could cause degradation of waters of the state. However, in the absence of acidic conditions, these wastes do not pose a water quality threat. In addition, the ash itself is not capable of generating acidic leachate. Any future discharge of ash to the landfill would be prohibited from being commingled with domestic refuse and disposed in a monofill.

#### WASTES AND THEIR CLASSIFICATION

9. The Discharger proposes to continue discharging municipal solid waste and inert waste for disposal in a Class III landfill as shown on Attachment "B" which is incorporated herein and made part of this Order. These wastes have been classified as 'nonhazardous solid waste' or 'inert waste', respectively, using the criteria set forth in Chapter 15. The site currently receives approximately 13 tons of refuse daily. The areas served by the landfill are the communities of Westwood and Clear Creek.

#### DESCRIPTION OF THE SITE

10. The facility is one mile west of Westwood and north of Highway 36. The site is flat and has a surface slope from north to south at a grade of one to two percent. Site elevation ranges from 5,160 feet mean sea level (MSL) to approximately 5,190 MSL.
11. Land within 1,000 feet of this site is vacant forestland in private ownership.
12. Surface soils consist of silty, sandy gravel and gravelly, silty sand of the Tournquist Association. The Tournquist Association is quaternary alluvial sediments and is overlying Pleistocene basalt lava flows. The soil was developed from weathered volcanic rock and has good natural drainage and a moderate degree

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of permeability. The surface sediment ranges in thickness from 7 to 21 feet. The Pleistocene basalt lava flows range in color from dark gray to reddish gray. Red cinder lenses are separately distributed in the basalt. The underlain volcanic rock is relatively impermeable and has a thickness in excess of 250 feet.

13. An unnamed quaternary fault is within one and one-half miles southwest of the landfill site. There are no active faults known within the region.
14. The first water-bearing formation is approximately 105 to 155 feet below the ground surface (elevation 5,032 to 5,059 feet MSL). The hydraulic gradient is east to west at 0.029 feet/foot. The ground water flow is within fractured volcanic rock, and it is not practical to estimate ground water flow velocity without further hydrologic data. The aquifer is confined and has a hydraulic head of 20 to 60 feet. The quality of this water is excellent with total dissolved solids (TDS) ranging from 120 to 190 mg/l, and appears to be calcium bicarbonate in nature.

Two old monitoring wells were installed to a depth of 110 feet below surface in July 1984. The wells immediately dried up and have not contained water since July 1984, which indicates no perched zone immediately below the WMU.

15. The ground water monitoring system installed in May 1988 consists of one upgradient well designated MW-3 and two downgradient wells designated MW-1 and MW-2 as shown on Attachment "B". Vadose monitoring (lysimeter) was installed adjacent to MW-1. The SWAT report indicates there is no off-site migration of hazardous or nonhazardous waste.
16. The beneficial uses of ground water are domestic, municipal, and agricultural supply.
17. The site receives an average of 30 inches of precipitation per year as measured at Hamilton Branch PH between the years 1953 and 1974. The mean evaporation for this facility is 40 inches per year. Based on these data, the annual net evaporation at the site is 10 inches.
18. The 100-year, 24-hour precipitation event is 4.51 inches as calculated from information in Department of Water Resources' Bulletin No. 195, "Rainfall Analysis for Drainage Design".
19. The facility is not within a 100-year floodplain.
20. Surface drainage is to Robbers Creek, one mile east, and Dry Creek, one mile west of the landfill. Both creeks are tributary to Mt. Meadows Reservoir which is tributary to Lake Almanor.

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21. The beneficial uses of Robbers Creek and Dry Creek are domestic and agricultural supply; esthetic enjoyment; preservation and enhancement of fish, wildlife, and other aquatic resources.
22. The Discharger's data provide sufficient justification to demonstrate that 100 feet of natural geologic material between the base of the Class III landfill unit and ground water will prevent the impairment of beneficial uses of ground water from the discharge of 'nonhazardous solid waste' to the landfill unit during operation, closure, and post-closure.

**CERTIFICATION**

23. The landfill has not been certified as being in compliance with siting requirements of Chapter 15.

**CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) CONSIDERATIONS**

24. The action to update WDRs for this existing landfill is exempt from the provisions of CEQA (Public Resources Code Section 21000, et seq.), in accordance with Title 14, Section 15301, CCR.

**OTHER LEGAL REFERENCES**

25. The Board has adopted a Water Quality Control Plan, 2nd Edition, for the Sacramento River Basin (5A) which contains water quality objectives for all waters of the Basin. This Order implements the water quality objectives stated in that Plan. Furthermore, this Order implements the prescriptive standards and performance goals of Chapter 15, effective 27 November 1984.
26. All local agencies with jurisdiction to regulate land use, solid waste disposal, air pollution, and to protect public health have approved the use of this site for the discharges of waste to land stated herein.
27. The Board has notified the Discharger and interested agencies and persons of its intent to revise the WDRs for this facility.
28. In a public hearing, the Board heard and considered all comments pertaining to this facility and discharge.

IT IS HEREBY ORDERED that Order No. 75-216 be rescinded and Lassen County, in order to meet the provisions of Division 7 of the California Water Code and the regulations adopted thereunder, shall comply with the following:

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**A. Prohibitions**

1. The discharge of 'hazardous waste' and 'designated waste' at this site is prohibited. For the purposes of this Order, the terms 'hazardous waste' and 'designated waste' are as defined in Chapter 15.
2. The discharge of liquid or semisolid waste (i.e., waste containing less than 50-percent solids) at this site is prohibited.
3. The discharge at this site of solid waste containing free liquid or moisture in excess of the waste's moisture-holding capacity is prohibited.
4. The discharge of solid or liquid waste or leachate to surface waters, surface water drainage courses, or ground water is prohibited.
5. The discharge of waste to ponded water from any source is prohibited.
6. The discharge of waste within 100 feet of surface waters is prohibited.
7. Codisposal of ash with municipal refuse is prohibited.
8. The discharge of wastes which have the potential to reduce or impair the integrity of containment structures or which, if commingled with other wastes in the unit, could produce violent reaction, heat or pressure, fire or explosion, toxic by-products, or reaction products which, in turn,:
  - a. require a higher level of containment than provided by the unit,
  - b. are 'restricted hazardous wastes', or
  - c. impair the integrity of containment structures,is prohibited.

**B. Discharge Specifications**

**GENERAL SPECIFICATIONS**

1. Wastes shall be discharged only into WMUs specifically designed for their containment and/or treatment as stated in Finding Nos. 2, 3, and 4 of this Order and shown on Attachment "B".

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2. Wastes shall not be discharged below 5,140 feet MSL. A minimum separation of 20 feet shall be maintained between wastes or leachates and the highest anticipated elevation of underlying ground water, including the capillary fringe.
3. Prior to the discharge of waste to a WMU, all wells within 500 feet of the unit shall have sanitary seals which meet the requirements of the Lassen County Health Department or shall be properly abandoned. A record of the sealing and/or abandonment of such wells shall be sent to the Board and to the State Department of Water Resources.
4. Water used for facility maintenance shall be limited to the minimum amount necessary for dust control.

**General WMU Construction**

5. Materials used to construct liners shall have appropriate physical and chemical properties to ensure containment of discharged wastes over the operating life, closure, and post-closure maintenance period of the WMUs.
6. Natural geologic materials used in place of a liner shall be confirmed as being a continuous layer immediately underlying the WMU, having a minimum thickness of 10 feet and a maximum hydraulic conductivity of  $1 \times 10^{-8}$  cm/sec. This shall be accomplished through a series of borings, performed by or under the supervision of a registered civil engineer or certified engineering geologist, to a depth of not less than 10 feet below the WMU and on a horizontal spacing of not more than 200 feet on centers. These borings shall be sealed so as not to impair the integrity of this layer. The logs of these borings shall be submitted to the Regional Board for review and approval prior to construction of the WMU.
7. Clay liners and landfill caps shall have a maximum hydraulic conductivity of  $1 \times 10^{-6}$  cm/sec and a minimum relative compaction of 90 percent. Hydraulic conductivities of liner materials shall be determined by laboratory tests using solutions with similar properties as the fluids that will be contained. Hydraulic conductivities of cap materials shall be determined by laboratory tests using water. Hydraulic conductivities determined through laboratory methods shall be confirmed by field testing of the finished liner using a method approved by the Regional Board. Construction methods and quality assurance procedures shall be sufficient to ensure that all parts of the liner and cap meet the hydraulic conductivity and compaction requirements.

#### **Supervision And Certification Of Construction**

8. All containment structures shall be designed and constructed under the direct supervision of a California registered civil engineer or a certified engineering geologist, and shall be certified by that individual as meeting the prescriptive standards and performance goals of Chapter 15 prior to waste discharge.

#### **Water Quality Protection Standards**

9. The concentrations of indicator parameters or waste constituents in waters passing through the points of compliance shall not exceed the "water quality protection standards" established pursuant to and enumerated in Monitoring and Reporting Program No. 90-308, which is attached to and made part of this Order.

#### **Protection From Storm Events**

10. The site shall be designed, constructed, and operated to prevent inundation or washout due to floods with a 100-year return period. The Class III landfill shall be constructed and maintained to prevent, to the greatest extent possible, ponding, infiltration, inundating erosion, slope failure, washout, and overtopping under 100-year, 24-hour precipitation conditions.
11. Precipitation and drainage control systems shall be designed and constructed to accommodate the anticipated volume of precipitation and peak flows from surface runoff and 100-year, 24-hour precipitation conditions as described in Finding No. 17 above.
12. Surface drainage from tributary areas and internal site drainage from surface or subsurface sources shall not contact or percolate through wastes.
13. Annually, prior to the anticipated rainy season, any necessary erosion control measures shall be implemented and any necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed to prevent erosion or flooding at the site.

#### **LANDFILL SPECIFICATIONS**

14. During the rainy season, a minimum one-foot thickness of low-permeability cover shall be maintained over all but the active disposal area of the landfill unit. The active disposal area shall be confined to the smallest area practicable based on the anticipated quantity of waste discharge and other waste management facility operations.

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15. Methane and other landfill gases shall be adequately vented, removed from the landfill unit, or otherwise controlled to prevent the danger of explosion, adverse health effects, nuisance conditions, or the impairment of beneficial uses of water due to migration through the vadose (unsaturated) zone.

**WMU CLOSURE SPECIFICATIONS**

16. The closure of each WMU shall be under the direct supervision of a California registered civil engineer or certified engineering geologist.
17. Closed WMUs shall be provided with at least two permanent monuments, installed by a licensed land surveyor, from which the location and elevation of all wastes, containment structures, and monitoring facilities can be determined throughout the post-closure maintenance period.

**Landfill Closure**

18. At closure, each landfill unit shall receive a final cover which is designed and constructed to function with minimum maintenance and consists, at a minimum, of a two-foot-thick foundation layer which may contain waste materials, overlain by a one-foot-thick clay liner, and finally by a one-foot-thick vegetative soil layer or an engineered equivalent final cover approved by the Board pursuant to Subsections 2510(b) and (c) of Chapter 15.
19. Vegetation shall be planted and maintained over each closed landfill unit. Vegetation shall be selected to require a minimum of irrigation and maintenance, and shall have a rooting depth not in excess of the vegetative layer thickness.
20. Closed landfill units shall be graded to at least a three-percent grade and maintained to prevent ponding.
21. Areas with slopes greater than 10 percent, surface drainage courses, and areas subject to erosion by wind or water shall be designed and constructed to prevent such erosion.

**C. Provisions**

1. The Discharger shall, in a timely manner, remove and relocate any wastes discharged at this facility in violation of this Order.
2. The Discharger shall maintain a copy of this Order at the facility and make it available at all times to facility operating personnel, who shall be familiar with its contents, and to regulatory agency personnel.

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3. The Discharger shall notify the Board in writing of any proposed change in ownership or responsibility for construction or operation of the WMUs. The Discharger shall also notify the Board of any material change in the character, location, or volume of the waste discharge and of any proposed expansions or closure plans. This notification shall be given **180 days** prior to the effective date of the change and shall be accompanied by an amended Report of Waste Discharge and any technical documents that are needed to demonstrate continued compliance with these WDRs.
4. The Discharger shall comply with Monitoring and Reporting Program No. 90-308, which is attached to and made part of this Order.
5. The Discharger shall maintain legible records of the volume and type of each waste discharged at each WMU and the manner and location of discharge. Such records shall be maintained at the facility until the beginning of the post-closure maintenance period. These records shall be available for review by representatives of the Board and of the State Water Resources Control Board at any time during normal business hours. At the beginning of the post-closure maintenance period, copies of these records shall be sent to the Regional Board.
6. Within **180 days** of the adoption of these requirements, the Discharger shall submit to the Board and to the Department of Health Services for approval a report describing a periodic load-checking program to be implemented by the Discharger to ensure that 'hazardous wastes' and 'designated wastes' are not discharged to the Class III landfill unit.
7. If the Discharger, through a detection monitoring program, or the Board finds there is a statistically significant increase in indicator parameters or waste constituents over the water quality protection standards (established pursuant to Monitoring and Reporting Program No. 90-308) at or beyond the points of compliance, the Discharger shall notify the Board or acknowledge the Board's finding in writing within **7 days** and shall immediately resample for the constituents or parameters at the point where the standard was exceeded. Within **90 days**, the Discharger shall submit to the Board the results of the resampling and either:
  - a. a report demonstrating that the water quality protection standard was not, in fact, exceeded; or
  - b. an amended Report of Waste Discharge for the establishment of a verification monitoring program, per Section 2557 of Chapter 15, which is designed to verify that water quality protection standards have been exceeded and to determine the horizontal and vertical extent of pollution.

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8. If the Discharger, through a verification monitoring program, or the Board verifies that water quality protection standards have been exceeded at or beyond the points of compliance, the Discharger shall notify the Board or acknowledge the Board's finding in writing within 7 days. Within 180 days, the Discharger shall submit to the Board an amended Report of Waste Discharge for the establishment of a corrective action program, per Section 2558 of Chapter 15, which is designed to achieve compliance with the water quality protection standards.
9. The Discharger or persons employed by the Discharger shall comply with all notice and reporting requirements of the State Department of Water Resources with regard to the construction, alteration, destruction, or abandonment of all monitoring wells used for compliance with this Order or with Monitoring and Reporting Program No. 90-308, as required by Sections 13750 through 13755 of the California Water Code.
10. The Discharger shall immediately notify the Board of any flooding, equipment failure, slope failure, or other change in site conditions which could impair the integrity of waste or leachate containment facilities or of precipitation and drainage control structures.
11. The Discharger shall submit to the Board, for approval, a preliminary closure and post-closure maintenance plan not later than the time of application for each solid waste facility's permit review pursuant to Title 14, CCR, Chapter 5, Article 3.1, Section 18213(b). The closure and post-closure maintenance plan shall describe the methods and control to be used to assure protection of the quality of surface and ground waters of the area during final operations and during any subsequent use of the land. The plan must include: 1) an estimate of closure and post-closure maintenance costs; 2) a proposal for a trust fund or equivalent financial arrangement to finance closure and post-closure; and 3) the amount to be deposited in the trust fund or equivalent financial arrangement each year. This plan shall be prepared by or under the supervision of a California registered civil engineer or certified engineering geologist, updated annually, and submitted to the Board by the 15th day of January of each year.
12. The Discharger shall maintain waste containment facilities and precipitation and drainage controls, and shall continue to monitor ground water, leachate from the landfill unit, the vadose zone, and surface waters per Monitoring and Reporting Program No. 90-308 throughout the post-closure maintenance period.
13. The post-closure maintenance period shall continue until the Board determines that remaining wastes in all WMUs will not threaten water quality.

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14. The Discharger shall comply with the Standard Provisions and Reporting Requirements, dated 1 July 1990, which are hereby incorporated into this Order.
15. The owner of the waste management facility shall have the continuing responsibility to assure protection of usable waters from discharged wastes and from gases and leachate generated by discharged waste during the active life, closure, and post-closure maintenance period of the WMUs and during subsequent use of the property for other purposes.
16. In the event of any change in ownership of this waste management facility, the Discharger shall notify the succeeding owner or operator in writing of the existence of this Order. A copy of that notification shall be sent to the Board.
17. The Discharger shall complete the tasks outlined in these WDRs and the attached Monitoring and Reporting Program No. 90-308, in accordance with the following time schedule:

Task

Compliance Date

Submit report describing a  
periodic load-checking program

180 days after adoption

Submit report describing closure  
and post-closure maintenance of  
the facility

180 days after adoption

18. The Discharger shall comply with all applicable provisions of Chapter 15 that are not specifically referred to in this Order.
19. The Board will review this Order periodically and will revise these requirements when necessary.

I, WILLIAM H. CROOKS, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 2 November 1990.



WILLIAM H. CROOKS, Executive Officer

GDD:gln 9/17/90

Attachments

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. 90-308

FOR  
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**NONHAZARDOUS SOLID WASTE MONITORING**

The Discharger shall monitor all wastes discharged to the Class III landfill unit on a monthly basis and report to the Board as follows:

<u>Parameter</u>	<u>Report in Units of</u>	<u>Frequency of Reporting</u>
Quantity Discharged	cubic yards	Quarterly
Type of Material Discharged	--	Quarterly
Source(s) of Material Discharged	--	Quarterly
Minimum Elevation of Discharge	feet & tenths, MSL	Quarterly
Capacity of Landfill Unit Remaining	percent	Annually

**GROUND WATER MONITORING**

The following detection monitoring program shall be implemented at the facility to determine both background and downgradient concentrations of indicator parameters. The monitoring network shall consist of background monitoring well MW-3 and downgradient monitoring wells MW-1 and MW-2, and shall constitute the "points of compliance" with respect to ground water. The locations of these wells are shown on Attachment "B". The following shall be measured when sampling ground water:

<u>Parameter/Constituent</u>	<u>Report in Units of</u>	<u>Sampling Frequency</u>
Chemical Oxygen Demand	mg/l	Quarterly
Specific Conductance	$\mu$ mhos/cm	Quarterly
pH	pH units	Quarterly
Total Dissolved Solids	mg/l	Quarterly
Dissolved Organic Carbon	mg/l	Quarterly
Chlorides	mg/l	Quarterly
Sulfates	mg/l	Quarterly
Dissolved Iron <sup>1</sup>	mg/l	Quarterly
Total Kjeldahl Nitrogen	mg/l	Quarterly
Sulfides (including H <sub>2</sub> S)	presence or absence	Quarterly

<sup>1</sup> Inductively Coupled Argon Plasma Atomic Emission Spectroscopy (ICAP) may be used for analysis of these constituents only.

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<u>Parameter/Constituent</u>	<u>Report in Units of</u>	<u>Sampling Frequency</u>
Nitrates	mg/l	Quarterly
Calcium	mg/l	Quarterly
Magnesium	mg/l	Quarterly
Sodium	mg/l	Quarterly
Iron	mg/l	Quarterly
Potassium	mg/l	Quarterly
Alkalinity (Bicarbonate and Carbonate)	mg/l	Quarterly
Turbidity	NTUs	Quarterly
Volatile Organics <sup>2</sup>	µg/l	Annually
Aluminum <sup>1</sup>	mg/l	Annually
Arsenic	mg/l	Annually
Cadmium <sup>1</sup>	mg/l	Annually
Total Chromium (III+VI) <sup>1</sup>	mg/l	Annually
Chromium (VI)	mg/l	Annually
Copper <sup>1</sup>	mg/l	Annually
Lead <sup>1</sup>	mg/l	Annually
Manganese <sup>1</sup>	mg/l	Annually
Mercury	mg/l	Annually
Nickel <sup>1</sup>	mg/l	Annually
Selenium	mg/l	Annually
Silver <sup>1</sup>	mg/l	Annually
Thallium <sup>1</sup>	mg/l	Annually
Zinc <sup>1</sup>	mg/l	Annually

<sup>1</sup> Inductively Coupled Argon Plasma Atomic Emission Spectroscopy (ICAP) may be used for analysis of these constituents only.

<sup>2</sup> EPA Methods 601 and 602, or EPA Method 624 shall be used. All peaks shall be reported.

The Discharger shall determine at each sampling whether there is a statistically significant increase over water quality protection standards for each parameter and constituent analyzed.

The ground water surface elevation (in feet and hundredths, MSL) in all wells shall be measured on a monthly basis and used to determine the velocity and direction of ground water flow. This information shall be displayed on a water table contour map and/or ground water flow net for the site.

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### VADOSE ZONE MONITORING

The following detection monitoring program shall be implemented at the facility to determine compliance. The monitoring shall consist of Lysimeter No. 1 as shown on Attachment "B". Samples from the suction lysimeter shall be analyzed for the parameters and constituents listed under "GROUND WATER MONITORING" above at the indicated frequencies.

### WATER QUALITY PROTECTION STANDARDS

Water quality protection standards for ground water will be established from analyses of samples from background monitoring well MW-3 as listed under "GROUND WATER MONITORING" above. Data from these analyses shall be reported to the Board by **1 October 1992** for use by the Board in determining water quality protection standards for ground water.

If subsequent water sampling indicates significant water quality changes due to either seasonal fluctuations or other reasons unrelated to waste management activities at the site, the Discharger may request modification of these water quality protection standards.

### Statistical Procedures For Determining Significant Increases

The significance of increases in indicator parameters and waste constituents over water quality protection standards shall be established through the use of appropriate statistical tests and procedures described in the EPA document entitled *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities*, published in April 1989. Where the data allow, the one-way parametric Analysis of Variance (ANOVA) test is preferred. Other suitable statistical tests may be used with the approval of the Executive Officer.

### REPORTING

In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. The data shall be summarized in such a manner so as to illustrate clearly the compliance with waste discharge requirements.

Quarterly monitoring reports shall be submitted to the Board by the **15th day** of the following month, the month in which the samples were taken. Quarterly, semiannually, and yearly monitoring reports shall be submitted to the Board by the **15th day** of the month following the calendar quarter in which the samples were taken or observations made.

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The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported to the Board.

A report shall be submitted to the Board by 30 January of each year containing both tabular and graphical summaries of the monitoring data obtained during the previous year. The report shall include a discussion of compliance with the WDRs.

The Discharger shall implement the above monitoring program on the effective date of this Order.

Ordered by



WILLIAM H. CROOKS, Executive Officer

2 November 1990

(Date)

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## INFORMATION SHEET

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Lassen County operates a landfill one mile west of the town of Westwood.

The landfill was first operated by the County in December 1975 as a sanitary landfill. The site serves approximately 2,000 people in and around Westwood and Clear Creek. The site has a total capacity of 774,000 cubic yards and a remaining capacity estimated at 693,730 cubic yards. The Discharger plans to operate the site for at least the next 50 years.

The landfill is situated on a plateau which has surface slightly to the south at a grade of approximately one to two percent. The site is situated on volcanic formations covered by pyroclast lava flows. The surface soil, which is 7 to 21 feet thick, was developed from weathered volcanic rock and has good natural drainage and a moderate degree of permeability. The underlain volcanic rock is relatively impermeable and has a thickness in excess of 250 feet.

Ground water is approximately 105 to 155 feet below ground surface and is of excellent water quality. Movement of ground water is within fractured basalts. The aquifer is confined and has a hydraulic head of 20 to 60 feet within the monitoring wells. There is no indication of a perched water table below the landfill site.

The landfill currently accepts 1,116 tons of 'nonhazardous solid waste' and 'inert waste' annually.

A geologic study completed in April 1990 demonstrates the natural geologic materials between the base of the landfill and ground water will prevent the impairment of beneficial uses of ground water from the discharge of 'nonhazardous solid waste' to the landfill unit during the operation, closure, or post-closure maintenance period.

The current ground water monitoring system consists of one upgradient and two downgradient wells. Vadose zone monitoring consists of one suction lysimeter near MW-1. The monitoring system was installed in May 1988.

The average annual rainfall at the site is approximately 30 inches while the mean annual evaporation is approximately 40 inches, resulting in a net evaporation of 10 inches per year.



